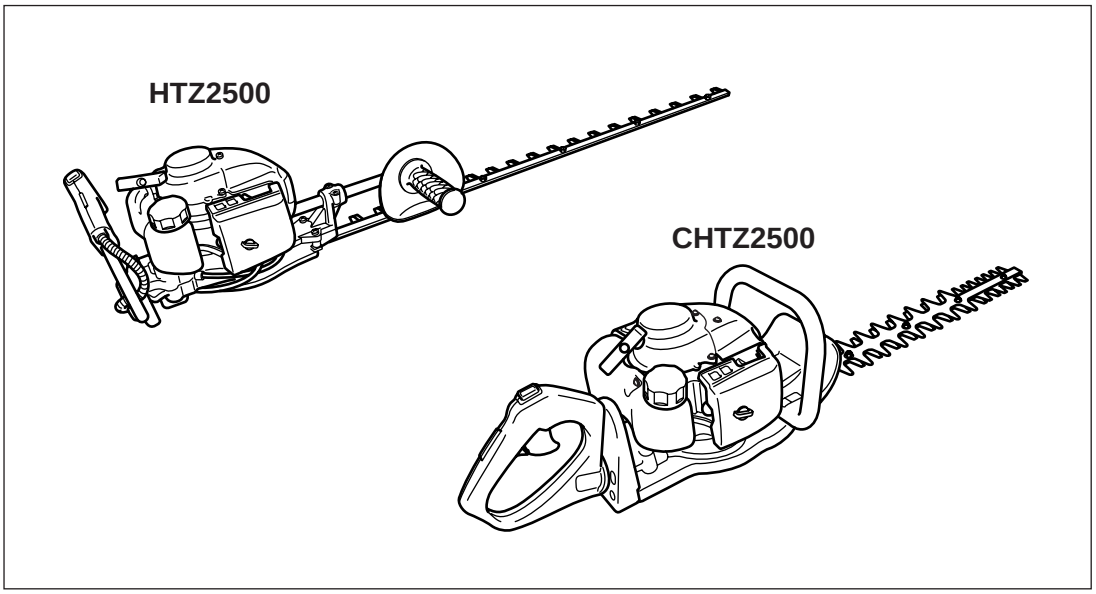
T1501-93110 (204)

RedMax®

OWNER/OPERATOR MANUAL

HEDGE-TRIMMERS

HTZ2500
CHTZ2500

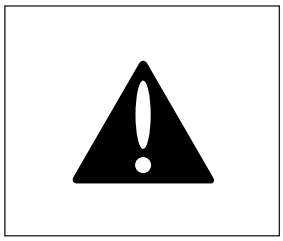


⚠ WARNING ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Thank you for purchasing a RedMax product.
Before using our hedge-trimmers, please read this manual carefully to understand the proper use of your unit.

APPLICABLE SERIAL NUMBERS : 100101 and up



⚠ SAFETY FIRST

Instructions contained in warnings within this manual marked with a ⚠ symbol concern critical points which must be taken into consideration to prevent possible serious bodily injury, and for this reason you are requested to read all such instructions carefully and follow them without fail.

■ WARNINGS IN THE MANUAL

⚠WARNING

This mark indicates instructions which must be followed in order to prevent accidents which could lead to serious bodily injury or death.

IMPORTANT

This mark indicates instructions which must be followed, or it leads to mechanical failure, breakdown, or damage.

NOTE

This mark indicates hints or directions useful in the use of the product.

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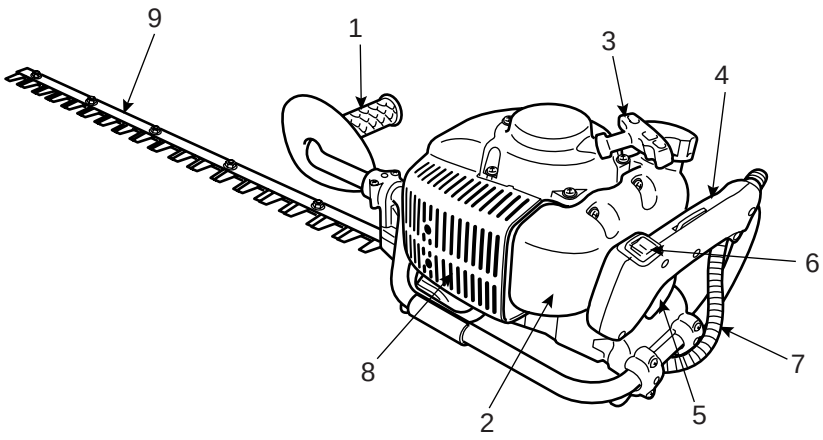
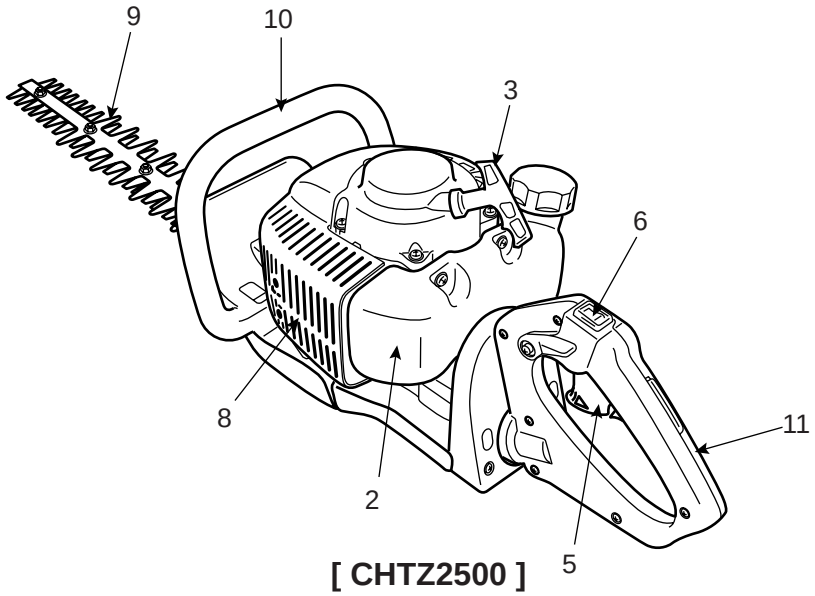
1. Parts location



[HTZ2500]



[CHTZ2500]

1. Right handle
2. Fuel tank
3. Starter
4. Left handle
5. Throttle lever
6. Ignition switch
7. Throttle Cable
8. Muffler
9. Blade
10. Front handle
11. Rear handle

2. Specifications

Engine Type	Air-cooled 2-stroke gasoli
Model	Zenoah GZ
Displacement	1.6cu-in (25.4cm
Max. output	1.2Hp (0.9kW)at 7500r/min (rpm)
Idle speed	3000r/min (rpm)
Fuel	Mixture (Gasoline 50 : Oil
Carburetor	Walbro Diaphragm typ
Spark plug	NGK CMI
Fuel tank capacity	539 ml (18.2 fl.oz (0.
Durability period	300hrs.

■ HTZ2500

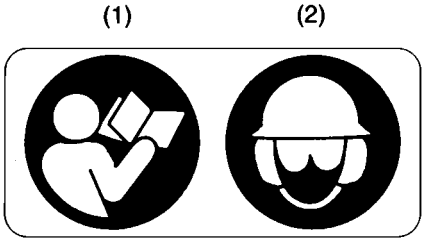
Type	Reciprocating single-sided dual blades
Blade size	750 (mm) / 30
Blade pitch	41 (mm) / 1.62
Dry weight	5.5 (kg) / 12.1 (l
Transmission	Centrifugal clutch, Cam-crank
Reduction ratio	4

■ CHTZ2500

Type	Reciprocating double-sided dual blades
Blade size	600 (mm) / 24
Blade pitch	41 (mm) / 1.62
Dry weight	5.5 (kg) / 12.1 (l
Transmission	Centrifugal clutch, Cam-crank
Reduction ratio	4

Specifications are subject to change without notice.

3. Warning labels on the machine



(1) Read owner's manual before operating this machine.
(2) Wear head, eye and ear protection.

IMPORTANT

If warning label peel off or become soiled and impossible to read, you should contact the dealer from which you purchased the product to order new labels and affix them in the required location(s).

WARNING

Never modify your machine.
We won't warrant the machine, if you use the remodeled hedge-trimmer or you don't observe the proper usage written in the manual.

4. Symbols on the machine

For safe operation and maintenance, symbols are carved in relief on the machine. According to these indications, please be careful not to make a mistake.

(a)

(a) The port to refuel the "MIX GASOLINE"
Position: FUEL TANK CAP

(b)

(b) The direction to close the choke
Position: AIR CLEANER COVER

(c)

(c) The direction to open the choke
Position: AIR CLEANER COVER

IMPORTANT ENGINE INFORMATION

THIS ENGINE MEETS U.S. EPA PH2 AND 2001 CALIFORNIA EMISSION REGULATIONS FOR SI SORE's COMPLIANCE PERIOD : CATEGORY A
ENGINE FAMILY : 1KZXS.0254QR ; EM
ENGINE DISPLACEMENT : 25.4cc
REFER TO OWNER'S MANUAL FOR MAINTENANCE SPECIFICATIONS AND ADJUSTMENTS.

KOMATSU ZENOAH CO. MADE IN JAPAN

RedMax® Use RedMax 50:1 Oil *!*

INFORMATION IMPORTANTE CONCERNANT LE MOTEUR

Ce moteur est conformc aux normcs U.S. EPA PH2 et 2001 ainsi qu'aux autres dispositions ultérieures de la réglementation concernant la pollution de l'air pour les petits moteurs tout-terrain avec une période de accordable : CATEGORY A
Type de moteur : 1KZXS.0254QR :EM
Cylindrée du moteur : 25,4cc
Se référer au Manuel de l'utilisateur pour les spécifications d'entretien et les réglages.

KOMATSU ZENOAH CO. MADE IN JAPAN

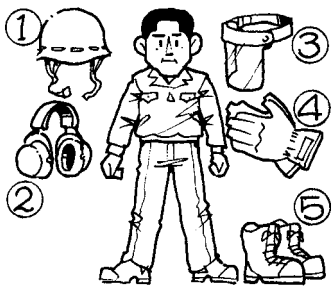
RedMax® Use RedMax 50:1 Oil *!*

⚠ 5. For safe operation

1. Read this manual carefully until you completely understand and follow all safety and operating instructions.
2. Keep this manual handy so that you may refer to it later whenever any questions arise. Also note, if you have any questions which cannot be answered herein, contact the dealer from whom you purchased the product.
3. Always be sure to include this manual when selling, lending, or otherwise transferring the ownership of this product.
4. Never allow children or anyone unable to fully understand the directions given in the manual to use the machine.

■ WORKING CONDITION

1. When using the product, you should wear proper clothing and protective equipment.

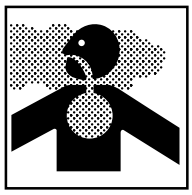


(1) Helmet
(2) Ear protectors
(3) Protection goggles or face protector
(4) Thick work gloves
(5) Non-slip-sole work boots

2. And you should carry with you.
   (1) Attached tools
   (2) Properly reserved fuel
   (3) Spare blade
   (4) Things to notify your working area (rope, warning signs)
   (5) Whistle (for collaboration or emergency)
   (6) Hatchet or saw (for removal of obstacles)

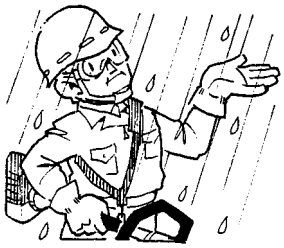
3. Do not wear loose clothing, jewelry, short trousers, sandals, or go barefoot. Do not wear anything which might be caught by a moving part of the unit. Secure hair so it is above shoulder length.

■ WORKING CIRCUMSTANCE



1. Never start the engine inside a closed room or building. Exhaust gases contain dangerous carbon monoxide.
2. Never use the product,
   a. when the ground is slippery or when you can't maintain a steady posture.

⚠ 5. For safe operation



b. At night, at times of heavy fog, or at any other times when your field of vision might be limited and it would be difficult to gain a clear view of the working area.
c. During rain storms, during lightning storms, at times of strong or gale-force winds, or at any other times when weather conditions might make it unsafe to use the product.

■ WORKING PLAN

1. You should never use the product when under the influence of alcohol, when suffering from exhaustion or lack of sleep, when suffering from drowsiness as a result of having taken cold medicine or at any other time when a possibility exists that your judgment might be impaired or that you might not be able to operate the product properly and in a safe manner.
2. When planning your work schedule, allow plenty of time to rest. Limit the amount of time over which the product is to be used continuously to somewhere around 30~40 minutes per session, and take 10~20 minutes of rest between work sessions. Also try to keep the total amount of work performed in a single day under 2 hours or less.

⚠WARNING

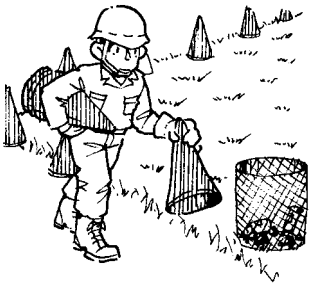
1. If you don't observe the working time, or working manner (See ■USING THE PRODUCT), Repetitive Stress Injury(RSI) could occur.
If you feel discomfort, redness and swelling of your fingers or any other part of your body, see a doctor before getting worse.

2. To avoid noise complaints, in general, operate product between 8a.m. and 5p.m. on weekdays and 9a.m. to 5p.m. weekends.

NOTE

Check and follow the local regulations as to sound level and hours of operations for the product.

⚠ 5. For safe operation



■ BEFORE STARTING THE ENGINE

1. The area within a perimeter of 50 feet (15m) of the person using the product should be considered a hazardous area into which no one should enter. If necessary yellow warning rope, warning signs should be placed around the perimeter of the area. When work is to be performed simultaneously by two or more persons, care should also be taken to constantly look around or otherwise check for the presence and locations of other people working so as to maintain a distance between each person sufficient to ensure safety.
2. Check the condition of working area to avoid any accident by hitting hidden obstacles such as stumps, stones, cans, or broken grass.

❗ IMPORTANT

Remove any obstacle before beginning work.

3. Inspect the entire unit for loose fasteners and fuel leakage. Make sure that the cutting attachment is properly installed and securely fastened.

■ STARTING THE ENGINE

1. Keep bystanders and animals at least 50feet (15m) away from the operating point. If you are approached, immediately stop the engine.
2. The product is equipped with a centrifugal clutch mechanism, so the cutting attachment begins to rotate as soon as the engine is started by putting the throttle into the start position. When starting the engine, place the product onto the ground in a flat clear area and hold it firmly in place so as to ensure that neither the cutting part nor the throttle come into contact with any obstacle when the engine starts.

⚠WARNING

Never place the throttle into the high speed position when starting the engine.

3. After starting the engine, check to make sure that the cutting attachment stops rotating when the throttle is moved fully back to its original position. If it continues to rotate even after the throttle has been moved fully back, turn off the engine and take the unit to your authorized Red Max servicing dealer for repair.

■ **USING THE PRODUCT**

❗IMPORTANT

Cut only materials recommended by the manufacturer. And use only for tasks explained in the manual.

1. Grip the handles firmly with both hands using your whole hand. Place your feet slightly apart (slightly further apart than the width of your shoulders) so that your weight is distributed evenly across both legs, and always be sure to maintain a steady, even posture while working.
2. Maintain the speed of the engine at the level required to perform cutting work, and never raise the speed of the engine above the level necessary.
3. If the unit start to shake or vibrate, turn off the engine and check the whole unit. Do not use it until the trouble has been properly corrected.
4. Keep all parts of your body away from rotating cutting attachment and hot surfaces.
5. Never touch the muffler, spark plug, or other metallic parts of the engine while the engine is in operation or immediately after shutting down the engine. Doing so could result in serious burns or electrical shock.

⚠ 5. For safe operation

- **IF SOMEONE COMES**

1. Guard against hazardous situations at all times. Warn adults to keep pets and children away from the area. Be careful if you are approached. Injury may result from flying debris.
2. If someone calls out or otherwise interrupts you while working, always be sure to turn off the engine before turning around.

■ **MAINTENANCE**

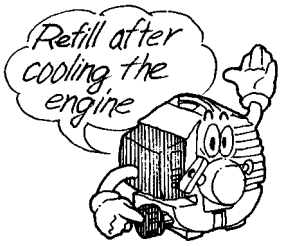
1. In order to maintain your product in proper working order, perform the maintenance and checking operations described in the manual at regular intervals.
2. Always be sure to turn off the engine before performing any maintenance or checking procedures.

⚠WARNING

The metallic parts reach high temperatures immediately after stopping the engine.

3. When replacing the cutting attachment or any other part, or when replacing the oil or any lubricant, always be sure to **use only RedMax products or products which have been certified by RedMax for use with the RedMax product**.
4. In the event that any part must be replaced or any maintenance or repair work not described in this manual must be performed, please contact a representative from the store nearest RedMax authorized servicing dealer for assistance.
5. Do not use any accessory or attachment other than those bearing the RedMax mark and recommended for the unit.
6. Under no circumstances should you ever take apart the product or alter it in any way. Doing so might result in the product becoming damaged during operation or the product becoming unable to operate properly.

5. For safe operation



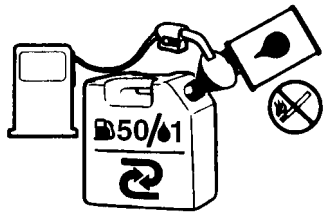
■ HANDLING FUEL

1. The engine of the RedMax product is designed to run on a mixed fuel which contains highly flammable gasoline. Never store cans of fuel or refill the tank of the unit in any place where there is a boiler, stove, wood fire, electrical sparks, welding sparks, or any other source of heat or fire which might ignite the fuel.
2. Never smoke while operating the unit or refilling its fuel tank.
3. When refilling the tank, always turn off the engine and allow it to cool down. Take a careful look around to make sure that there are no sparks or open flames anywhere nearby before refueling.
4. Wipe spilled fuel completely using a dry rag if any fuel spillage occurs during refueling.
5. After refueling, screw the fuel cap back tightly onto the fuel tank and then carry the unit to a spot 10feet (3m) or more away from where it was refueled before turning on the engine.

■ TRANSPORTATION

1. When hand-carrying the product, cover over the cutting part if necessary, lift up the product and carry it paying attention to the blade.
2. Never transport the product over rough roads over long distances by vehicle without removing all fuel from the fuel tank. If doing so, fuel might leak from the tank during transport.

6. Fuel



50:1 MIXING CHART

GASOLINE gal.	1	2	3	4	5
2-CYCLE OIL fl.oz	2.6	5.2	7.8	10.4	13

GASOLINE liter	1	2	3	4	5
2-CYCLE OIL ml	20	40	60	80	100

⚠WARNING

- **Gasoline is very flammable. Avoid smoking or bringing any flame or sparks near fuel. Make sure to stop the engine and allow it cool before refueling the unit. Select outdoor bare ground for fueling and move at least 3m(10ft) away from the fueling point before starting the engine.**
- The RedMax engines are lubricated by oil specially formulated for air-cooled 2-cycle gasoline engine use. If RedMax oil is not available, use an anti-oxidant added quality oil expressly labeled for air-cooled 2-cycle engine use. (JASO FC GRADE OIL or ISO EGC GRADE)

RECOMMENDED MIXING RATIO
GASOLINE 50:OIL 1

- **Exhaust emission are controlled by the fundamental engine parameters and components(eq., carburation, ignition timing and port timing) without addition of any major hardware or the introduction of an inert material during combustion.**
- These engines are certified to operate on unleaded gasoline.
- Make sure to use gasoline with a minimum octane number of 90 ROZ(USA/Canada : pump octane min.87)
- Unleaded gasoline is recommended to reduce the contamination of the air for the sake of your health and the environment.
- Poor quality gasolines or oils may damage sealing rings, fuel lines or fuel tank of the engine.

■ HOW TO MIX FUEL

1. Measure out the quantities of gasoline and oil to be mixed.
2. Put some of the gasoline into a clean, approved fuel container.
3. Pour in all of the oil and agitate well.
4. Pour in the rest of gasoline and agitate again for at least one minute.
5. Put a clear indication on the outside of the

container to avoid mixing up with gasoline or other containers.
6. Indicate the contents on outside of container for easy identification.

■ **FUELING THE UNIT**

1. Untwist and remove the fuel cap. Rest the cap on a dustless place.
2. Put fuel into the fuel tank to 80% of the full capacity.
3. Fasten the fuel cap securely and wipe up any fuel spillage around the unit.

⚠WARNING

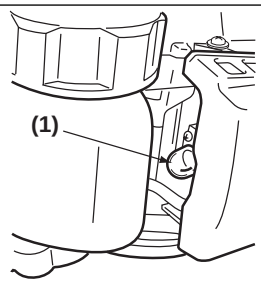
1. Select bare ground for fueling.
2. Move at least 10 feet (3 meters) away from the fueling point before starting the engine.
3. Stop the engine before refueling the unit.

FOR YOUR ENGINE LIFE, AVOID;

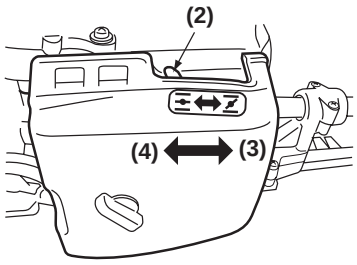
1. FUEL WITH NO OIL(RAW GASOLINE) – It will cause severe damage to the internal engine parts very quickly.
2. GASOHOL – It can cause deterioration of rubber and/or plastic parts and disruption of engine lubrication.
3. OIL FOR 4-CYCLE ENGINE USE or WATER COOLED 2-CYCLE ENGINE USE – It can cause spark plug fouling, exhaust port blocking, or piston ring sticking.
4. **Mixed fuels which have been left unused for a period of one month or more** may clog the carburetor and result in the engine failing to operate properly.

7. Operation

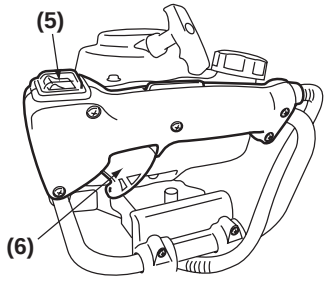
OP1



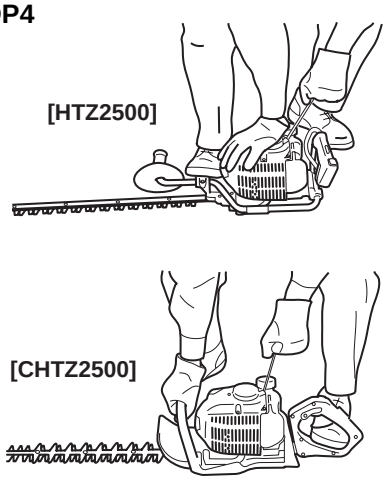
OP2



OP3



OP4



■ STARTING ENGINE

⚠WARNING

The cutting head will start rotating upon the engine starts.

1. Rest the unit on a flat, firm place. Keep the cutting head off the ground and clear of surrounding objects as it will start rotating upon starting of the engine.
2. Push the primer pump several times until overflown fuel flows out in the clear tube. (OP1)
3. Move the choke lever to the closed position. (OP2)
4. Set the ignition switch to the “START” position. (OP3)

(1) primer pump
(2) choke lever
(3) close
(4) open
(5) ignition switch
(6) throttle lever

5. Holding the hedge-trimmer down, pull the starting rope slowly until you meet resistance (OP4). Then operatel hard several times, and when the engine starts, wait for about 10 seconds and then pull the throttle lever (OP3(6)), the choke lever (OP2(2)) will return automatically to the original “OPEN” position.

⚠WARNING

Use the semi-acceleration device only in the phase of starting the engine.

❗IMPORTANT

- Avoid pulling the rope to its end or returning it by releasing the knob. Such actions can cause starter failures.

NOTE

1. When restarting the engine immediately after stopping it, leave the choke open.
2. Overchoking can make the engine hard to start due to excess fuel. When the engine failed to start after several attempts, open the choke and repeat pulling the rope, or remove the spark plug and dry it.

■ **STOPPING ENGINE (OP3)**

1. Release the throttle lever and run the engine for a half minute.
2. Shift the ignition switch to the “STOP” position.

IMPORTANT

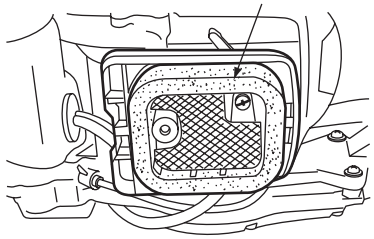
- Except for an emergency, avoid stopping the engine while pulling the throttle lever.

IMPORTANT

RUNNING IN THE ENGINE

- During the first 20 working hours, do not use the hedge-trimmer at maximum power for long periods.

OP5



■ **ADJUSTING IDLING SPEED**

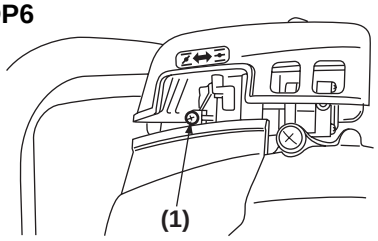
- Before adjusting the carburetor, clean the air filter and warm up the engine. (OP5)

(1) air filter

- Idle screw is adjusted in order to ensure a good safety margin between idle running and clutch engagement. (OP6)

(1) Idle screw

OP6



WARNING

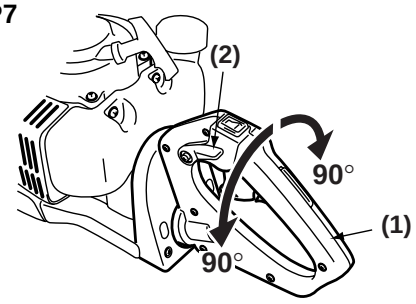
With the engine idling (3200 rpm), the blade should not rotate. We recommend that you have the dealer or an authorised mechanic carry out any carburetor adjustments.

7. Operation

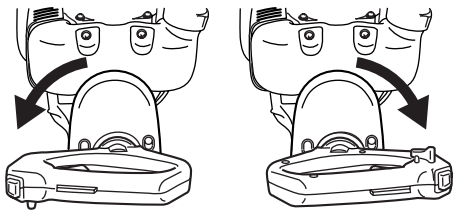
⚠WARNING

- **Weather conditions and altitude may effect carburation.**
- **Do not allow anyone to stay close to the hedge-trimmer while working or while adjusting the carburetor.**

OP7



OP8



■ HOW TO USE

HANDLE (CHTZ2500 only)

To reduce fatigue when trimming hadges, the handle can be swivelled through 90° to the left or right. (OP7, OP8).

Do not press the throttle during this operation!

Proceed as follows:

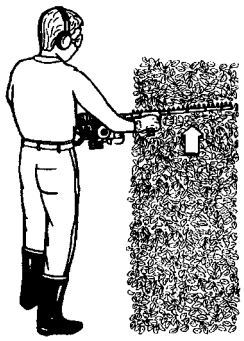
1. Free the handle by pressing the locking lever; (OP7)
2. Turn the handle until the locking lever clicks into place;
3. When the handle is locked in its new position, you can apply the throttle again.

(1) handle
(2) locking lever

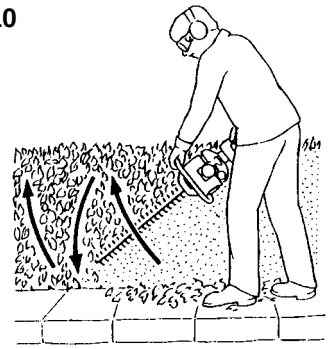
You can swivel the handle even with the engine idling because the hedge-trimmer is equipped with a blade brake that maintains the blades at a standstill.

7. Operation

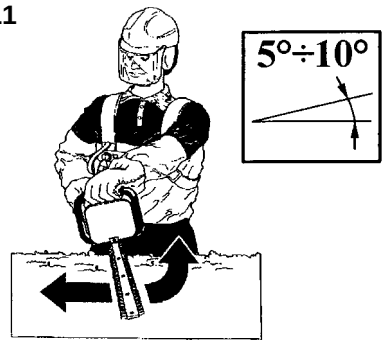
OP9



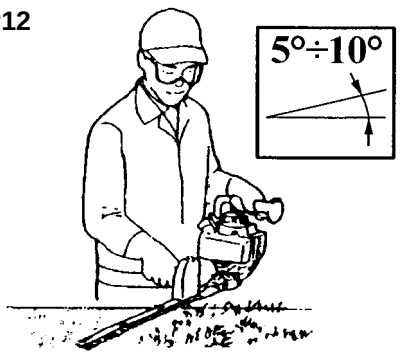
OP10



OP11



OP12



HEDGE TRIMMING TECHNIQUES

Trim sides of a hedge first, and then the top.

Vertical cut:

- With the single-sided blade hedge-trimmer, model HTZ2500 always cut from the bottom up (OP9). With the 2-sided blade model CHTZ2500 use an arcing cut from the bottom upwards, then downwards to use both sides of the blades (OP10).

Horizontal cut:

- In order to get the best cutting results, slightly tilt the blade (5÷10°) towards the cutting direction (OP11, OP12).
  Cut slowly, specially with thick hedges.

⚠WARNING

Always follow the safety precautions.
The hedge-trimmer must only be used to trim hedges or small bushes. It is forbidden to cut other types of material. Do not use the hedge-trimmer as a lever to lift, move or break objects, nor lock it on fixed supports. It is forbidden to apply tools or applications that are not the ones indicated by the manufacturer onto the hedge-trimmer's power take-off. Do not use it for pruning trees or cutting grass.

8. Maintenance

■ MAINTENANCE CHART

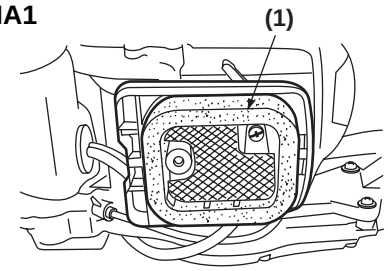
	system/compornent	procedure	before use	every 25 hours after	every 50 hours after	every 100 hours after	note
ENGINE	fuel leaks, fuel spillage	wipe out	✔				
	fuel tank, air filter, fuel filter	inspect/clean	✔	✔			replace, if necessary
	idle adjusting screw	see ■ADJUSTING IDLING SPEED (p.17)	✔				replace carburetor if necessary
	spark plug	clean and readjust plug gap			✔		GAP: .025in(0.6~0.7mm) replace, if necessary
	cylinder fins, intake air cooling vent	clean		✔			
	muffler, spark arrester, cylinder exhaust port	clean				✔	
SHAFT	throttle lever, ignition switch	check operation	✔				
	cutting parts	replace if something's wrong	✔				
	gear case	grease		✔			
	screws/nuts/bolts	tighten/replace	✔			✔	not adjusting screws
	blade guard	make sure to attach	✔				

8. Maintenance

⚠WARNING

- **Make sure that the engine has stopped and is cool before performing any service to the machine. Contact with moving cutting head or hot muffler may result in a personal injury.**

MA1

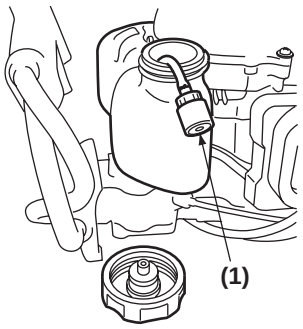


■ **AIR FILTER**

- The air filter, if clogged, will reduce the engine performance. Check and clean the filter element in warm, soapy water as required. Dry completely before installing. If the element is broken or shrunk, replace with a new one. (MA1)

(1) air filter

MA2

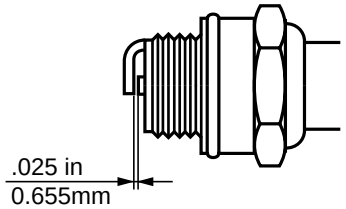


■ **FUEL FILTER**

- When the engine runs short of fuel supply, check the fuel cap and the fuel filter for blockage. (MA2)

(1) fuel filter

MA3



■ **SPARK PLUG**

- Starting failure and mis-firing are often caused by a fouled spark plug. Clean the spark plug and check that the plug gap is in the correct range. For a replacement plug, use the correct type specified by RedMax. (MA3)

- **REPLACEMENT PLUG IS A NGK CMR7A.**

❗IMPORTANT

- Note that using any spark plug other than those designated may result in the engine failing to operate properly or in the engine becoming overheated and damaged.
- To install the spark plug, first turn the plug until it is finger tight, then tighten it a quarter turn more with a socket wrench.

TIGHTENING TORQUE: 87~104 in-lbs (9.8~11.8 N.m.)

■ **MUFFLER**

⚠WARNING

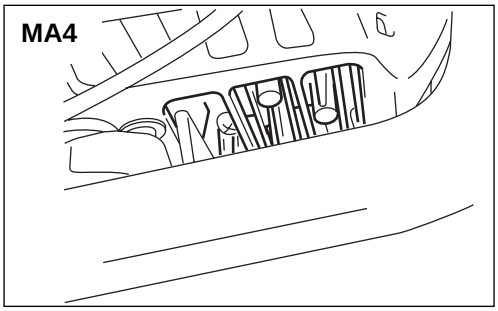
- Inspect periodically, the muffler for loose fasteners, any damage or corrosion. If any sign of exhaust leakage is found, stop using the machine and have it repaired immediately.
- **Note that failing to do so may result in the engine catching on fire.**

■ **INTAKE AIR COOLING VENT**

⚠WARNING

- **Never touch the cylinder, muffler, or spark plugs with your bare hands immediately after stopping the engine. The engine can become very hot when in operation, and doing so could result in severe burns.**

MA4



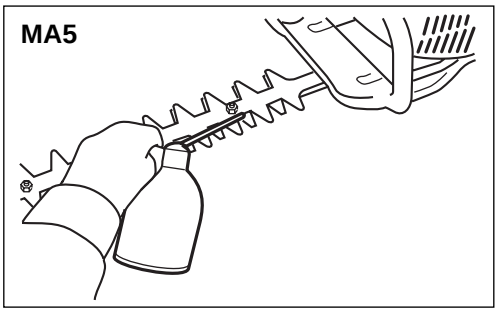
- Clean the cylinder fins with compressed air or a brush. (MA4)

❗IMPORTANT

- If waste gets stuck and causes blockage around the intake air cooling vent or between the cylinder fins, it may cause the engine to overheat, and that in turn may cause mechanical failure on the part of the hedge-trimmer.

8. Maintenance

MA5



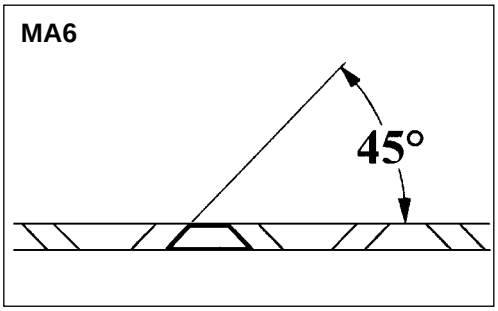
■ **BLADES**

Oil blades each gas tank filling (MA5).

⚠WARNING

- **Make sure that the blade bolts are well tightened.**
- **The blade assembly is designed to automatically compensate for any play between the blades.**

MA6



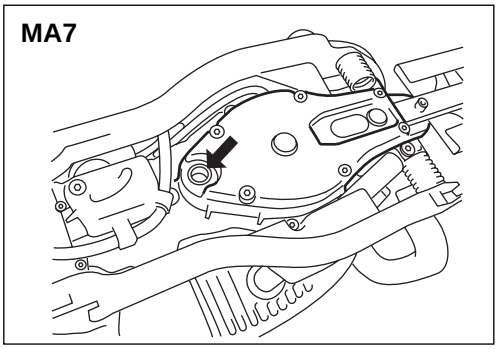
■ **SHARPENING** (MA6)

Always keep the file or sharpener at an angle of 45° to the blade, and:

- Always grind in the direction of the cutting edge;
- Note: files cut only in one direction; lift the file from the blade when returning to start a new pass;
- Remove all burr from the edge of the blade with a slip stone;
- Remove as little material as possible;
- Before refitting the sharpened blades, remove filings and then apply grease.

Do not try to sharpen a damaged blade: change it or take it to a Service dealer.

MA7



■ **REDUCTION GEARBOX**

Refill gear housing every 20 working hours (MA7). Use greese pump. Feed greese until it comes out of the base of blades.

■ **PROCEDURES TO BE PERFORMED AFTER EVERY 100 HOURS OF USE**

1. Tighten all screws, bolts, and fittings.
2. Check to see if any oil or grease has worked its way in between the clutch lining and drum, and if it has wipe it away using oil-free, lead-free gasoline.

9. Storage

- Oil the blade to prevent rust.
- Empty the fuel tank and put the cap back on.
- Remove the spark plug, pour a small amount of oil into the cylinder.
- Rotate the crankshaft several times using the starting rope in order to distribute the oil. Put the spark plug back in.
- Wrap the engine with a plastic sheet.
- Store the trimmer in a dry place, preferably not in direct contact with the floor and away from heat sources.

10. Troubleshooting guide

Case 1. Starting failure

CHECK		PROBABLE CAUSES		ACTION
fuel tank	→	incorrect fuel	→	drain it and with correct fuel
fuel filter	→	fuel filter is clogged	→	clean
carburetor adjustment screw	→	out of normal range	→	adjust to normal range
sparking (no spark)	→	spark plug is fouled/wet	→	clean/dry
	→	plug gap is incorrect	→	correct (GAP: 0.6~0.7mm)
spark plug	→	disconnected	→	retighten

Case 2. Engine starts but does not keep running/Hard re-starting.

CHECK		PROBABLE CAUSES		ACTION
fuel tank	→	incorrect fuel or staled fuel	→	drain it and with correct fuel
carburetor adjustment screw	→	out of normal range	→	adjust to normal range
muffler,cylinder (exhaust port)	→	carbon is built-up	→	wipe away
air cleaner	→	clogged with dust	→	wash
cylinder fin, fan cover	→	clogged with dust	→	clean

When your unit seems to need further service, please consult with our RedMax service shop in your area.

11. Parts list

HEDGE-TRIMMERS

HTZ2500
CHTZ2500

NOTE :

1. Use KOMATSU ZENOAH genuine parts as specified in the parts list for repair and/or replacement.
2. KOMATSU ZENOAH does not warrant the machines, which have been damaged by the use of any parts other than those specified by the company.
3. When placing parts orders for repair and/or replacement, check if the model name and the serial number are applicable to those specified in the parts list, then use parts number described in the parts list.
4. The contents described in the parts list may change due to improvement.
5. The parts for the machine shall be supplied seven (7) years after the machine is discontinued. [It is possible that some specific parts may be subject to change of their delivery term and list price within the limit of seven (7) years after the machine is discontinued. It is also possible that some parts may be available even after the limit of seven (7) years.]

April 2002

APPLICABLE SERIAL NUMBERS : 100101 and up

11. Parts list

Fig.1 CUTTING UNIT HTZ2500 (S/N 100101 and up)

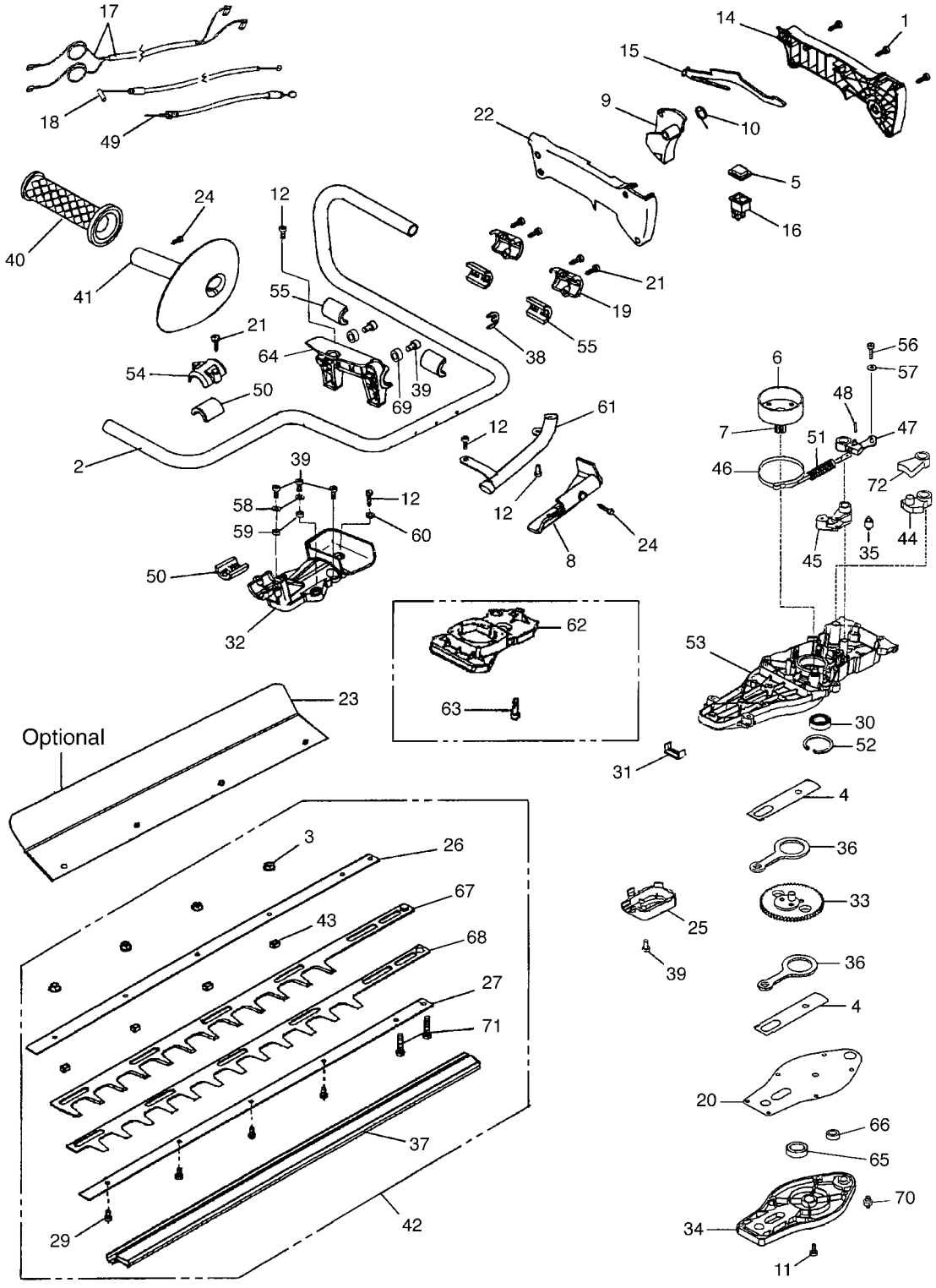


Fig.1 CUTTING UNIT HTZ2500 (S/N 100101 and up)

Key#	Description	Part Number	Q'ty
1	SCREW	3960067	5
2	HANDLE	58040143	1
3	NUT	3980014	4
4	PLATE	58040057	2
5	SWITCH GUARD	2317013	1
6	CLUTCH DRUM	58040218	1
7	DRIVE GEAR	58040217	1
8	GUARD	58040206	1
9	THROTTLE LEVER	58040084	1
10	SPRING	58040136	1
11	SCREW	3960082B	11
12	SCREW	3960073	8
14	REAR HANDLE	58040201	1
15	LEVER	58040085	1
16	SWITCH	2317021	1
17	CABLE	58040207	1
18	THROTTLE CABLE	58040116	1
19	COLLAR	58040204	2
20	GASKET	58040177	1
21	SCREW	3960067	2
22	REAR HANDLE	58040200	1
23	DEFLECTOR (OPTIONAL)	58040150	1
24	SCREW	012000028	2
25	COVER	58040196A	1
26	UPPER SUPPORT	58040049	1
27	LOWER SUPPORT	58040050	1
29	SCREW	3979021	4
30	BEARING	3035019	1
31	GASKET	58040106	1
32	SUPPORT	58040202	1
33	DRIVEN GEAR	58040230	1
34	COVER	58040188	1
35	ROLLER	58040072	1
36	CON-ROD	58040227	2
37	BLADE GUARD	58040122	1
38	LEVER	58040161	1
39	SCREW	3960073	11
40	HANDLE	58040197	2
41	GUARD	58040198	2
42	BLADES ASSY	58040094A	1
43	SPACER	58040051	7
44	BRAKE CAM	58040073	1
45	LEVER	58040095	1
46	BRAKE BAND	58040017	1

Key#	Description	Part Number	Q'ty
47	BAND LEVER	58040070	1
48	PIN	3033019	1
49	THROTTLE CABLE	58040186	1
50	COLLAR	58040111	2
51	SPRING	58040091	1
52	SNAP RING	3025022	1
53	RE GEAR BODY	58042021A	1
54	COLLAR	58040203	1
55	COLLAR	58040114	4
56	SCREW	3960069	4
57	WASHER	3918003	4
58	WASHER	3918010	4
59	BUSHING	61070015	4
60	BUSHING	61040020	1
61	DEFLECTOR	58040154	1
62	GEAR COVER	58040189	1
63	SCREW	3960082B	5
64	SUPPORT	58040199	1
65	BEARING	58040176	1
66	BEARING	58040182	1
67	UPPER BLADE	58040046A	1
68	LOWER BLADE	58040047A	1
69	SPACER	61070015	4
70	GREASE NIPPLE	58040180	1
71	SCREW	3801057	2
72	LEVER	58040074	1

11. Parts list

Fig.2 CUTTING UNIT CHTZ2500 (S/N 100101 and up)

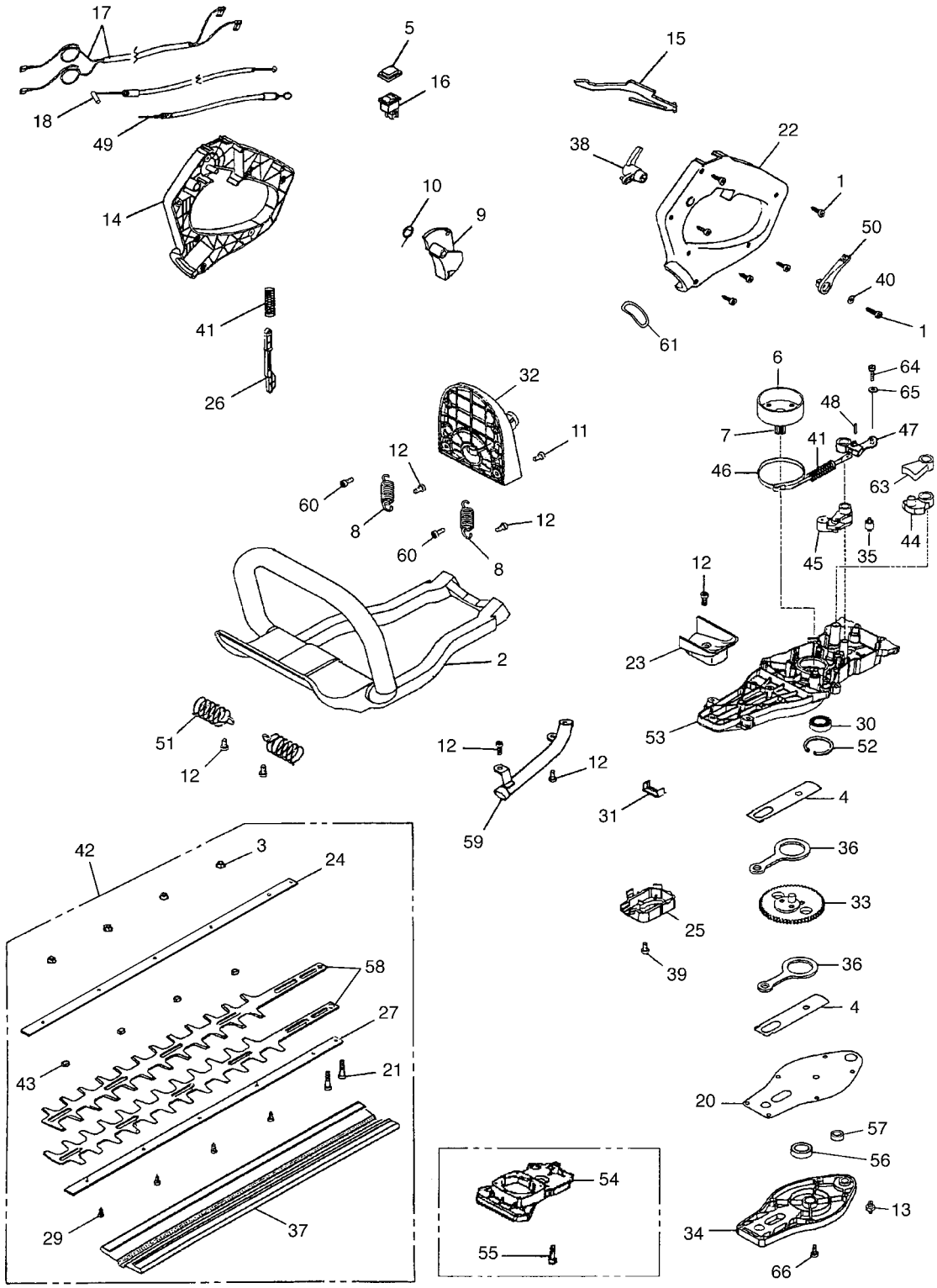


Fig.2 CUTTING UNIT CHTZ2500 (S/N 100101 and up)

Key#	Description	Part Number	Q'ty
1	SCREW	3960067	7
2	FRONT HANDLE	58040185A	1
3	NUT	3980014	4
4	PLATE	58040057	2
5	SWITCH GUARD	2317013	1
6	CLUTCH DRUM	58040218	1
7	DRIVE GEAR	58040217	1
8	SPRING	58040080	2
9	THROTTLE LEVER	58040084	1
10	SPRING	58040136	1
11	SCREW	3960057	2
12	SCREW	3960073	7
13	GREASE NIPPLE	58040180	1
14	HANDLE	58040181	1
15	LEVER	58040085	1
16	SWITCH	2317021	1
17	SWITCH CABLE	58040175	1
18	THROTTLE CABLE	58040087	1
20	GASKET	58040177	1
21	SCREW	3960067	2
22	REAR HANDLE	58040183	1
23	DEFLECTOR	58040184	1
24	BLADE SUPPORT	58040191	1
25	COVER	58040196A	1
26	ROD	58040090	1
27	BLADE GUIDE	58040045	1
29	SCREW	3979021	4
30	BEARING	3035019	1
31	GASKET	58040077	1
32	SUPPORT	58040187	1
33	DRIVEN GEAR	58040230	1
34	COVER	58040188	1
35	ROLLER	58040072	1
36	ROD	58040227	2
37	BLADE GUARD	58040092	1
38	LEVER	58040088	1
39	SCREW	58040074	11
40	WASHER	3918003	2
41	SPRING	58040091	1
42	BLADES ASSY	58040205A	1
43	SPACER	58040051	6
44	BRAKE CAM	58040073	1
45	LEVER	58040095	1
46	BRAKE BAND	58040017	1

Key#	Description	Part Number	Q'ty
47	BAND LEVER	58040070	1
48	PIN	3033019	1
49	THROTTLE CABLE	58040186	1
50	LEVER	58040089	1
51	SPRING	58040079	2
52	SNAP RING	3025022	1
53	GEAR BODY	58042021A	1
54	GEAR COVER	58040189	1
55	SCREW	3960082B	5
56	BEARING	58040176	1
57	BEARING	58040182	1
58	BLADE	58040043A	2
59	DEFLECTOR	58040135	1
60	SCREW	3960070	2
61	SPACER	3027015	1
63	LEVER	58040074	1
64	SCREW	3960069	1
65	WASHER	3918003	1
66	SCREW	3960082B	11

11. Parts list

Fig.3 ENGINE UNIT (S/N 100101 and up)

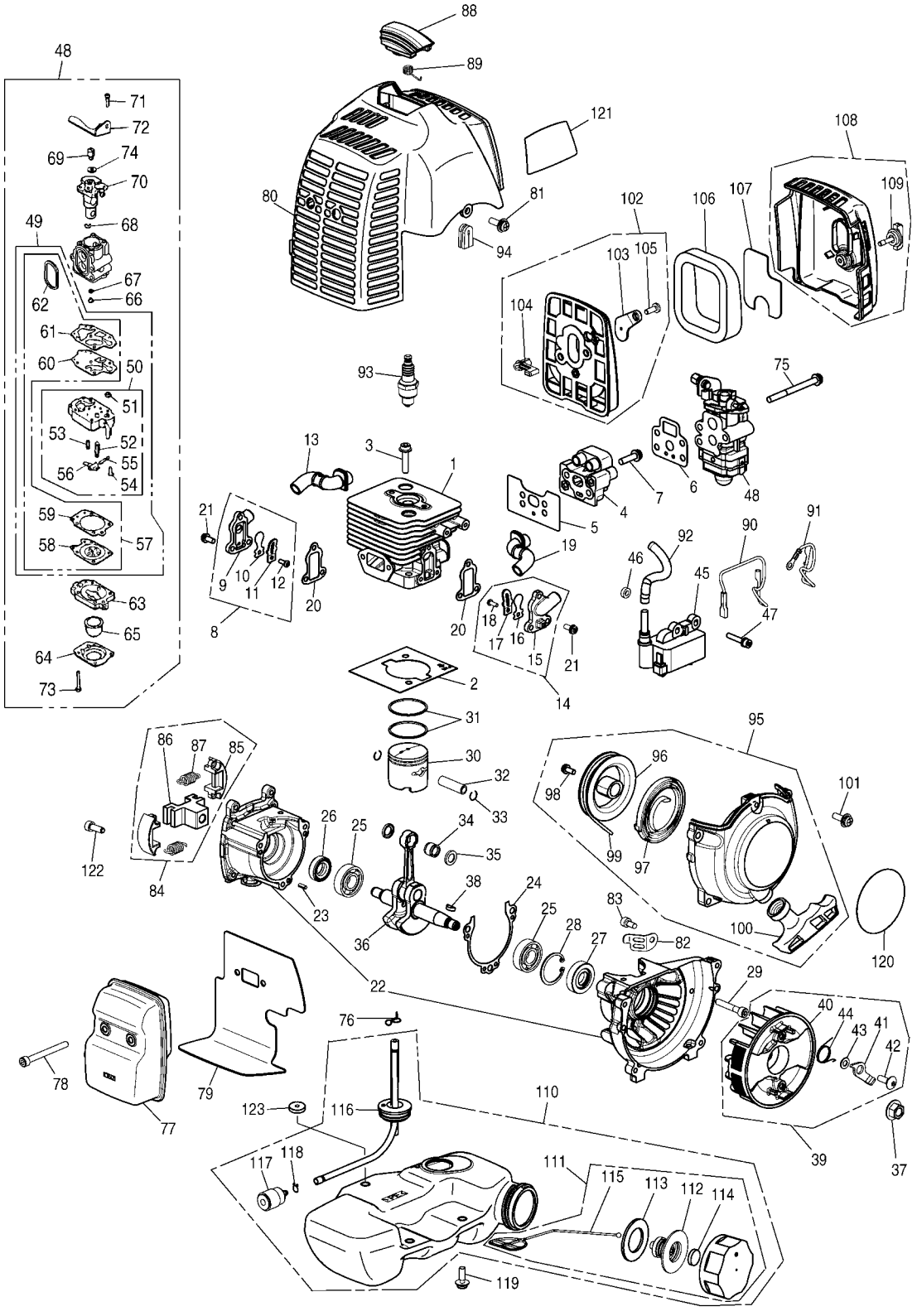


Fig.3 ENGINE UNIT (S/N 100101 and up)

Key#	Description	Part Number	Q'ty
1	CYLINDER	4810-12111	1
2	GASKET	4810-12210	1
3	BOLT	4820-12130	2
4	INSULATOR	4810-13162	1
5	GASKET, INSU	T1512-13120	1
6	GASKET, CARB	4810-13130	1
7	BOLT	4820-13180	2
8	REEDVALVE-A(S)	4810-16100	1
9	• VALVECASE(S)	4810-16110	1
10	• REEDVALVE	4810-16120	1
11	• STOPPER	4810-16130	1
12	• SCREW	4810-16170	1
13	PIPE, AIR(S)	4810-16150	1
14	REEDVALVE-A(F)	4810-16200	1
15	• VALVECASE(F)	4810-16210	1
16	• REEDVALVE	4810-16120	1
17	• STOPPER	4810-16130	1
18	• SCREW	4810-16170	1
19	PIPE, AIR(F)	4810-16160	1
20	GASKET, VALVE	4810-16140	2
21	BOLT	4820-16310	6
22	CRANKCASE-C	T1501-21100	1
23	• PIN	2629-21130	3
24	GASKET, CASE	4810-21140	1
25	BEARING	06030-06001	2
26	SEAL	4810-21210	1
27	SEAL	1850-21220	1
28	SNAPRING	04065-02812	1
29	BOLT	4820-21310	3
30	PISTON	4810-41110	1
31	RING	5010-41210	2
32	PIN	00-41310	1
33	SNAPRING	1260-41320	2
34	BEARING	5500-41410	1
35	WASHER	1101-41340	2
36	CRANKSHAFT-C	T1501-42000	1
37	NUT	1650-43230	1
38	KEY	1000-43240	1
39	ROTOR-A	T1501-71100	1
40	• ROTOR	T1501-71110	1
41	• PAWL	2841-71120	2
42	• SCREW	2850-71140	2
43	• WASHER	2850-71151	2
44	• SPRING	T1501-71130	2
45	COIL-A	T1501-71200	1
46	SPACER	1260-71261	2
47	BOLT	4820-72150	2
48	CARBURETOR-A	T1501-81000	1
49	• REBUILD KIT	4810-06031	1
50	•• BODY ASS'Y PUMP	4810-81450	1
51	••• SCREEN	————	1
52	••• VALVE	————	1
53	••• SPRING	————	1
54	••• SCREW	————	1
55	••• PIN	————	1
56	••• REVER	————	1
57	•• GASKET KIT	4810-06021	1
58	••• DIAPHRAGM	————	1
59	••• GASKET, diaphragm	————	1
60	••• DIAPHRAGM, pump	————	1
61	••• GASKET, pump	————	1
62	••• RING	4810-81130	1
63	• BODY, purge	1850-81490	1

Key#	Description	Part Number	Q'ty
64	• COVER, pump	1850-81520	1
65	• PUMP, priming	1751-81510	1
66	• JET	4810-81251	1
67	• O-RING	1751-81240	1
68	• RING	1751-81130	1
69	• SWIVEL	1881-81140	1
70	• VALVE ASS'Y	————	1
71	• SCREW	1752-81110	2
72	• BRACKET	5500-81120	1
73	• SCREW	1850-81530	4
74	• WASHER	5500-81160	1
75	BOLT	4820-82310	2
76	CLIP	1950-86120	1
77	MUFFLER	T1501-15110	1
78	BOLT	4820-15310	2
79	GASKET, MUFF	T1501-15211	1
80	COVER ENGINE	T1501-32110	1
81	BOLT	T1501-32120	3
82	GUARD	4810-22110	1
83	BOLT	4820-12350	1
84	SHOE-C	T1501-51100	1
85	• SHOE	T1501-51110	2
86	• BOSS	T1501-51120	1
87	• SPRING	T1501-51220	2
88	CAP	4810-72110	1
89	SPRING	1900-72120	1
90	CORD	T1512-71240	1
91	CORD, EARTH	T1512-71250	1
92	TUBE	T1512-71320	1
93	SPARK PLUG	4810-73110	1
94	GROMMET	4810-72120	1
95	RECOIL-A	T1501-75100	1
96	• REEL	T1512-75120	1
97	• SPRING, spiral	T1501-75130	1
98	• SCREW	1850-75151	1
99	• ROPE	T1501-75160	1
100	• KNOB	3330-75421	1
101	BOLT	T1501-32120	4
102	BODY-A	T1501-82100	1
103	• PLATE, CHOKE	T1501-82130	1
104	• LEVER	T1501-82140	1
105	• SCREW	2630-33610	1
106	ELEMENT	4810-82170	1
107	SCREEN	T1501-82180	1
108	COVER-A	T1501-82200	1
109	• KNOB	5500-82221	1
110	TANK-A	T1501-85000	1
111	• CAP-A	T1015-85202	1
112	•• HOLDER-A	4500-85300	1
113	•• PACKING	4500-85220	1
114	•• FILTER	5601-85260	1
115	•• STOPPER	4820-85260	1
116	• PIPE-C	4810-85300	1
117	• FILTER-A	5500-85400	1
118	• CLIP	1260-85460	1
119	BOLT	4820-83212	3
120	LABEL, RECOIL	T1501-75410	1
121	LABEL, COVER	4810-31132	1
122	BOLT	T1501-21150	4
123	PACKING	T1501-85120	2

CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board and KOMATSU ZENOAH are pleased to explain the **emission control system warranty** on your **1995 and later** small off-road engine. In California, new small off-road engines must be designed, built and equipped to meet the state's stringent anti-smog standards. KOMATSU ZENOAH must warrant the emission control system on your small off-road engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your small off-road engine.

Your emission control system may include parts such as the carburetor and the ignition system.

Where a warrantable condition exists, KOMATSU ZENOAH will repair your small off-road engine at no cost to you including diagnosis, parts and labor.

Manufacturer's warranty coverage:

The 1995 and later small off-road engines are warranted for **two years**. If any emission-related part on your engine is defective, the part will be repaired or replaced by KOMATSU ZENOAH.

Owner's warranty responsibilities:

– As the small off-road engine owner, you are responsible for the performance of the **required maintenance listed in your owner's manual**. KOMATSU ZENOAH recommends that you retain all receipts covering maintenance on your small off-road engine, but KOMATSU ZENOAH can not deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

– As the small off-road engine owner, you should be aware, however, that KOMATSU ZENOAH may deny you warranty coverage if your small off-road engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modification.

– You are responsible for presenting your small off-road engine to a KOMATSU ZENOAH distribution center as soon as a problem exists. The warranty repairs should be completed in e reasonable amount of time, not to exceed **30 days**.

If you have any questions regarding your warranty rights and responsibilities, you should contact KOMATSU ZENOAH AMERICA INC. at (770)-381-5147 or you can write to

KOMATSU ZENOAH AMERICA INC.
4344 Shackleford Road Suite 500
Norcross, Georgia 30093

RedMax 2-YEAR LIMITED WARRANTY

EMISSION-RELATED PARTS, FOR TWO (2) YEARS FROM THE DATE OF ORIGINAL DELIVERY, KOMATSU ZENOAH AMERICA INC. (THE COMPANY), THROUGH ANY RedMax DEALER, WILL REPAIR OR REPLACE, FREE OF CHARGE, FOR THE ORIGINAL AND EACH SUBSEQUENT PURCHASER, ANY PART OR PARTS FOUND TO BE DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP. EMISSION-RELATED PARTS ARE:

THE CARBURETOR ASSY, COIL ASSY, ROTOR, SPARKPLUG,
AIR FILTER, FUEL FILTER, INTAKE MANIFOLD, AND THE GASKETS

ALL OTHER PARTS EXCEPT ABOVE PARTS, FOR TWO (2) YEARS OF HOME USE [ONE (1) YEAR FOR ANY OTHER USE] FROM THE DATE OF ORIGINAL ANY DELIVERY, THE COMPANY. THROUGH ANY RedMax DEALER, WILL REPAIR OR REPLACE, FREE OF CHARGE, FOR THE ORIGINAL PURCHASER, ANY PART OF PARTS FOUND TO BE DEFECTIVE IN MATERIAL AND/OR WORKMANSHIP. **THIS IS THE EXCLUSIVE REMEDY.**

THE PURCHASER SHALL BEAR COSTS OF TRANSPORTING THE UNIT TO AND FROM THE RedMax DEALER.

THE PURCHASER SHALL NOT BE CHARGED FOR DIAGNOSTIC LABOR WHICH LEADS TO THE DETERMINATION THAT A WARRANTED PART IS DEFECTIVE, IF THE DIAGNOSTIC WORK IS PERFORMED AT THE RedMax DEALER.

THE PURCHASER OR OWNER IS RESPONSIBLE FOR THE PERFORMANCE OF THE REQUIRED MAINTENANCE AS DEFINED BY THE MANUFACTURER IN THE OWNER/OPERATOR MANUAL.

ANY WARRANTED PART WHICH IS NOT SCHEDULED FOR REPLACEMENT AS REQUIRED MAINTENANCE, OR WHICH IS SCHEDULED ONLY FOR REGULAR INSPECTION TO THE EFFECT OF "REPAIR OR REPLACE AS NECESSARY" SHALL BE WARRANTED FOR THE WARRANTY PERIOD.ANY WARRANTED PART WHICH IS SCHEDULED FOR REPLACEMENT AS REQUIRED MAINTENANCE SHALL BE WARRANTED FOR THE PERIOD OF TIME UP TO THE FIRST SCHEDULED REPLACEMNET POINT FOR THE PART.

ANY REPLACEMENT PART THAT IS EQUIVALENT IN PERFORMANCE AND DULABILITY MAY BE USED IN NON-WARRANTY MAINTENANCE OR REPAIRS, AND SHALL NOT REDUCE THE WARRANTY OBLIGATION OF THE COMPANY.

THE COMPANY IS LIABLE FOR DAMAGES TO OTHER ENGINE COMPONENTS CAUSED BY THE FAIRURE OF A WARRANTED PARTS STILL UNDER WARRANTY.

THE WARRANTY DOES NOT APPLY TO THOSE UNITS WHICH HAVE BEEN DAMAGED BY NEGLIGENCE OF INSTRUCTION LISTED IN THE OWNER/OPERATOR MANUAL FOR PROPER USE AND MAINTENANCE OF THE UNITS, ACCIDENT MISHANDLING, ALTERATION, ABUSE, IMPROPER LUBULICATION, USE OF ANY PARTS OR ACCESSARIES OTHER THAN THOSE SPECIFIED BY THE COMPANY, OR OTHER CAUSES BEYOND THE CONPANY'S CONTROL.

THIS WARRANTY DOES NOT COVER THOSE PARTS REPLACED BY NORMAL WEAR OR HARMLESS CHANGES IN THEIR APPEARANCE.

THERE ARE NO OTHER EXPRESS WARRANTIES.

IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE **ARE LIMITED** TO TWO (2) YEARS OF HOME USE [ONE (1) YEAR FOR ANY OTHER USE] FROM THE ORIGINAL DELIVERY DATE.

LIABILITIES FOR INCIDENTAL OR CONSEQUENTIAL DAMAGE UNDER ANY AND ALL WARRANTIES ARE EXCLUDED.

SOME STATES DO NOT ALLOW LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS OR EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMINATION OR EXCLUSION MAY NOT APPLY TO YOU.
THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.
IF YOU NEED TO OBTAIN INFORMATION ABOUT THE NEAREST SERVICE CENTER, PLEASE CALL KOMATSU ZENOAH AMERICA INC. AT (770)-381-5147.

IMPORTANT: YOU WILL RECEIVE A WARRANTY REGISTRATION CARD AT TIME OF PURCHASE.PLEASE FILL OUT THE CARD AND SEND IT TO RedMax / KOMATSU ZENOA AMERICA WITHIN SEVEN (7) DAYS.BE SURE TO KEEP A COPY FOR YOUR RECORDS.

RedMax®

KOMATSU ZENOAH AMERICA INC.
4344 Shackleford Road Suite 500
Norcross, Georgia 30093

RedMax Garantie limitée à 2 ans

Pièces en rapport avec les émissions de gaz d'échappement : KOMATSU ZENOAH AMERICA INC., par l'intermédiaire de n'importe quel revendeur RedMax, réparera gratuitement ou remplacera gratuitement pour l'acheteur initial et chaque acheteur successif toute(s) pièce(s) se révélant de constitution et/ou de montage défectueux pendant deux (2) ans à compter de la date initiale de livraison d'une unité. Les pièces en rapport avec les émissions de gaz d'échappement sont:

l'assemblage carburateur, l'assemblage bobine, le rotor, la bougie, le filtre à air, le filtre à carburant, la tubulure d'admission et les joints

Toutes autres pièces exceptées celles mentionnées ci-dessus : La société, par l'intermédiaire de n'importe quel revendeur RedMax, réparera gratuitement ou remplacera gratuitement pour l'acheteur initial toute(s) pièce (s) se révélant de constitution et/ou de montage défectueux pendant deux (2) ans en cas d'utilisation privée [un (1) an pour toute autre utilisation] à compter de la date de livraison initiale d'une unité. **Telles sont les limites de la garantie.**

Le coût du transport de l'unité jusqu'au revendeur RedMax et depuis celui-ci sera à la charge de l'acheteur.

L'acheteur ne supportera pas le coût de main d'oeuvre du diagnostic qui amène à la conclusion qu'une pièce garantie est défectueuse, si ce diagnostic est effectué chez le revendeur RedMax.

L'acheteur ou propriétaire a pour responsabilité d'effectuer l'entretien obligatoire tel que défini par le fabricant dans le manuel du propriétaire/de l'utilisateur.

Toute pièce garantie dont le remplacement n'est pas prévu dans le cadre de l'entretien obligatoire, ou pour laquelle est seulement prévue une inspection périodique pour "remplacement ou réparation si nécessaire" sera garantie pour la période de garantie. Toute pièce garantie arrivée à l'échéance de son premier remplacement prévu sera garantie jusqu'à celui-ci.

Toute pièce de rechange équivalente en performance ou en durabilité peut être utilisée pour l'entretien hors-garantie ou les réparations hors-garantie, et ce sans réduire l'obligation de garantie incombant à la société.

La société sera tenue responsable des dommages aux autres composants du moteur causés par la défaillance de pièce(s) garantie(s) en période de garantie.

La garantie ne s'applique pas aux unités endommagées par suite de: négligence dans la mise en oeuvre des instructions spécifiées dans le manuel du propriétaire/de l'utilisateur en vue d'une utilisation et d'un entretien correct, fausse manœuvre accidentelle, modification, utilisation abusive, lubrification incorrecte, utilisation de pièces ou d'accessoires autres que ceux spécifiés par la société, ou autres causes hors du contrôle de la société.

Cette garantie ne couvre pas les pièces remplacées en raison de leur usure normale ou de changements d'apparence sans effets.

Il n'existe aucune autre garantie explicite.

Les garanties implicites, celles de négociabilité du produit et de son adaptabilité à un usage défini incluses, **sont limitées** à deux (2) ans pour un usage privé [un (1) an pour toute autre utilisation] à compter de la date initiale de livraison.

Les responsabilités pour les dommage conséquents ou incidents sont exclues de toutes les garanties.

Certaines provinces n'autorisant pas les limitations à la durée des garanties implicites, ou les exclusions ou limitations relatives aux dommages incidents ou conséquents, la limitation indiquée ci-dessus peut ne pas vous être applicable.
Cette garantie vous donne des droits juridiques spécifiques, et vous pouvez également jouir d'autres droits variant d'une province à l'autre.
Si vous désirez obtenir des informations sur le centre de service le plus proche, veuillez appeler KOMATSU ZENOAH AMERICA INC. au (770)-381-5147

Note importante: vous recevrez une carte d'enregistrement de garantie au moment de l'achat. Veuillez la remplir et l'adresser à RedMax / KOMATSU ZENOAH AMERICA sous sept (7) jours en prenant soin de conserver une copie pour vous.

RedMax®

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